the first electromagnet 908 to create a first magnetic field 806 and a second current 802 in the second electromagnet 912 to create a second magnetic field 804. By having the electrical control 916 change the magnitudes and direction of the first and second currents 800, 802 over time, the sum of the resulting first and second magnetic fields 806, 804 results in the same rotating magnetic field provided by the magnetic elements 702 in Fig.'s 2-4. This embodiment shows that it is possible to control movement of the magnetic field by using magnetic elements 702, which are electromagnets. Electromagnets offer the advantage of controlling the amount of magnetic flux, so that better process control may be achieved. However, electromagnets tend to further complicate the manufacturability of the system. In this embodiment of the invention, the electrical current supplied to the magnetic array 700 can control the strength and orientation of the magnetic field. Of course, electromagnetic magnetic elements 702 also could be physically manipulated in just the same way as permanent magnets to achieve the desired modulation in the magnetic field.

Please replace the Abstract beginning on page 21, line 8 with:

A plasma confinement arrangement for controlling ~~the volume of a plasma~~ while processing a substrate inside a process chamber includes a chamber within which a plasma is both ignited and sustained for processing. The chamber is defined at least in part by a wall and further includes a plasma confinement arrangement. The plasma confinement arrangement includes a magnetic array disposed inside of the chamber. The magnetic array has a plurality of magnetic elements that are disposed around a plasma region within the process chamber.

In the Claims

Please cancel claims 1 and 19-25.

Please amend claim 2 and add claims 26 to 29 as follows:

1. (Cancelled)

2. (Once Amended) A plasma processing apparatus for processing a substrate, comprising:[The apparatus, as recited in claim 1]

a process chamber, comprising:

a wall defining part of the process chamber;

a device for igniting and sustaining within the process chamber a plasma for said processing; and

[, wherein said process chamber further comprises]a chuck for supporting said substrate within said plasma confined in said process chamber, wherein said chuck is spaced apart from a first end of said process chamber, wherein said plasma is ignited and sustained in a plasma region between said first end of said process chamber and said chuck; and

a plasma confinement arrangement, comprising a magnetic array having a plurality of magnetic elements that are disposed within said process chamber, said plurality of magnetic elements being configured to produce a magnetic field, and wherein said plurality of magnetic elements are disposed around and extend along said plasma region.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (New) The apparatus, as recited in claim 2, wherein at least one magnetic element extends substantially from said first end of said process chamber to said chuck.

27. (New) The apparatus, as recited in claim 26, wherein the plurality of magnetic elements are disposed around and outside the periphery of the substrate.

28. (New) The apparatus, as recited in claim 26, wherein the magnet elements are placed to